

PHILIP MORRIS U. S. A.

## INTER-OFFICE CORRESPONDENCE

**RICHMOND, VIRGINIA**

**date:** April 28, 1976

Subject: . Comparison of Market Survey #18 Data of TITL vs. FTC vs. Philip Morris

The tar and nicotine data generated by TITL and FTC on Market Survey #18 showed good agreement between the two testing locations. Similar data published in the Philip Morris C.I. report dated September, 1975 averaged 0.3 mg/cigt. lower in tar. The overall tar and nicotine averages for the 145 brands tested are shown below. Individual values are plotted in Graphs I-VI.

	<u>Tar, mg/cigt.</u>	<u>Nicotine, mg/cigt.</u>
TITL	17.6	1.14
FTC	17.6	1.14
Philip Morris	17.3	1.14

The 0.3 mg/cigt. difference in tar between Philip Morris vs. TITL and FTC is the same as reported for Market Survey #17. From the data shown in Table I, the differences between TITL and Philip Morris prior to Market Surveys #17 and #18 were no greater than +0.1 mg/cigt. whereas, the difference between Philip Morris and FTC has always been in the range of 0.3-0.5 mg/cigt. There are no explanations for these differences. It also appears that TITL made an adjustment to raise their tar level prior to Market Survey #17 to more closely compare to FTC.

The data in Table II show the differences between tar and nicotine results for the brands tested in increments of 5 mg of tar delivery. In each category, Philip Morris is lower than FTC and TITL with the exception of the 26-30 mg and the 31-35 mg ranges where Philip Morris is higher than FTC. The best agreement between the three testing locations is in the 16-20 mg range which contains 55% of the brands tested.

The largest discrepancies between locations occurred in the 120 mm cigarette category. These data are shown in Table III. FTC was significantly higher in tar and nicotine delivery for these brands. The comparison of butt lengths in Table IV shows large differences in four of the twelve brands: Max, Max Menthol, More and More Menthol. FTC smoked these brands to a shorter butt length than TITL or Philip Morris. This would help to explain the higher tar and nicotine values for More and More Menthol. In the case of Max, the butt length was shorter, yet there was reasonably good agreement in tar and nicotine results compared to TITL and Philip Morris.

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Mr. J. E. Wickham

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Comparative testing between Philip Morris and TITL is planned to try to resolve the differences in overall tar level as well as the discrepancies noted in the 120 mm brand category.

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Dr. W. F. Gannon  
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Attachments - Tables I - IV  
Graphs I - VI

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TABLE I  
HISTORY OF PAST TAR DIFFERENCES  
FTC VS. TITL VS. PHILIP MORRIS

<u>Test No.</u>	<u>FTC</u>	<u>TITL</u>	<u>Philip Morris</u>
14	17.7	17.1	17.2
15	17.5	17.0	17.1
16	17.4	17.2	17.1
17	17.5	17.5	17.2
18	17.6	17.6	17.3

TABLE II  
DIFFERENCES IN TAR AND NICOTINE DELIVERIES  
IN INCREMENTS OF 5 MG OF TAR DELIVERY

<u>Tar Range</u>	<u>N</u>	<u>Tar, mg/cigt.</u>		<u>Nicotine, mg/cigt.</u>	
		<u><math>\Delta</math>TITL (TITL-PM)</u>	<u><math>\Delta</math>FTC (FTC-PM)</u>	<u><math>\Delta</math>TITL (TITL-PM)</u>	<u><math>\Delta</math>FTC (FTC-PM)</u>
0 - 5 mg	3	0.36	0.13	-0.08	-0.10
6 - 10 mg	8	0.62	0.52	-0.03	-0.05
11 - 15 mg	24	0.43	0.54	-0.03	-0.02
16 - 20 mg	80	0.13	0.29	-0.02	0.00
21 - 25 mg	14	0.79	1.50	+0.05	+0.07
26 - 30 mg	13	0.62	-0.77	+0.08	-0.01
31 - 35 mg	3	0.50	-1.33	+0.12	-0.04
Overall	145	0.33	0.33	0.00	0.00
0 - 15 mg	35	0.47	0.50	-0.04	-0.04
16 - 20 mg	80	0.13	0.29	-0.02	0.00
21 - 35 mg	30	0.69	0.23	+0.07	+0.03

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TABLE III  
TAR AND NICOTINE DELIVERIES FOR 120 MM BRANDS

Brand	Tar, mg/cigt.			Nicotine, mg/cigt.		
	P.M.	TITL	FTC	P.M.	TITL	FTC
Saratoga	16.0	16.2	17.5	1.03	1.02	1.08
Saratoga Menthol	16.5	16.3	18.2	1.08	1.02	1.11
Max	16.7	16.4	16.8	1.27	1.24	1.24
Max Menthol	16.3	16.7	17.3	1.25	1.27	1.30
Long Johns	19.3	18.9	21.7	1.56	1.47	1.59
Long Johns Menthol	16.5	16.4	19.8	1.37	1.33	1.48
L. T. Brown	19.5	20.3	20.8	1.49	1.53	1.55
L. T. Brown Menthol	20.9	21.8	21.8	1.55	1.62	1.60
More	20.0	21.7	24.5	1.48	1.54	1.66
More Menthol	19.9	21.3	23.7	1.50	1.58	1.72
Dawn	19.6	20.7	24.0	1.45	1.46	1.61
Dawn Menthol	20.4	21.2	24.1	1.54	1.57	1.73
Average	18.5	19.0	20.9	1.38	1.39	1.47

TABLE IV  
COMPARISON OF BUTT LENGTHS FOR 120 MM BRANDS

Brand	Butt Length		
	P.M.	TITL	FTC
Saratoga	38	38-39	37-38.5
Saratoga Menthol	38	38-39	37.5-39
Max	38	38-39	33-33.5
Max Menthol	38	38-39	31-34
Long Johns	38	37-39	36-38
Long Johns Menthol	38	37-39	36-39.5
L. T. Brown	38	37-39	37-38.6
L. T. Brown Menthol	38	37-39	35-37
More	38	37	33-35.5
More Menthol	38	37	33-34.5
Dawn	38	36-38	36.4-38.2
Dawn Menthol	38	36-38	36.4-37.9

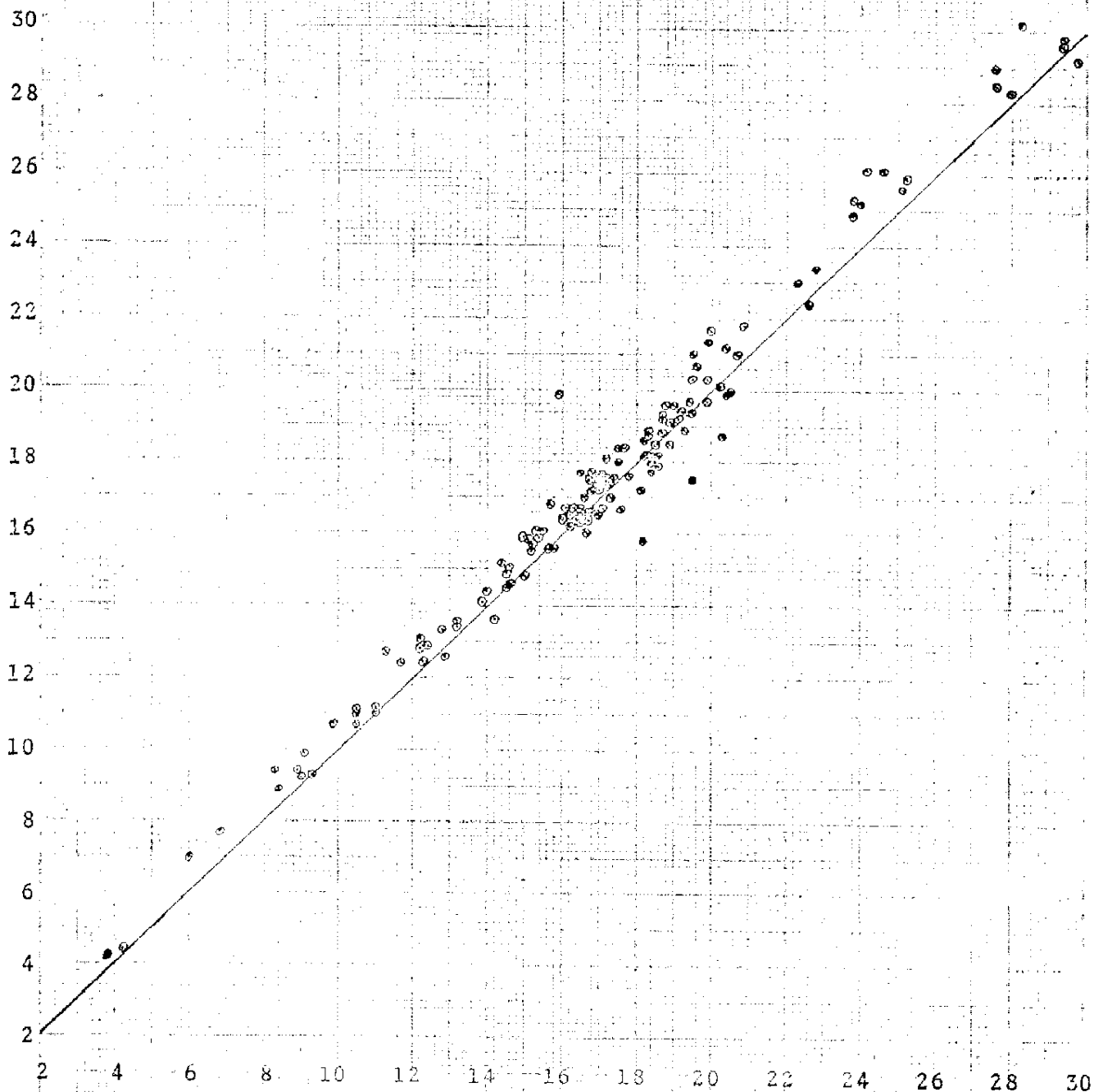
GRAPH #1

TITL MARKET SAMPLE #18 VS. PM DATA (SEPTEMBER, 1975)

FTC TAR

TITL MARKET SAMPLE #18

FTC TAR, NG/CIGT.



PHILIP MORRIS DATA (SEPTEMBER, 1975)

FTC TAR, NG/CIGT.

The 45° line represents zero difference  
in the FTC Tar between laboratories.

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GRAPH #2

TITL MARKET SAMPLE #18 VS. PM DATA (SEPTEMBER, 1975)

NICOTINE

TITL MARKET SAMPLE #18

NICOTINE, MG/CIGT.

2.60  
2.40  
2.20  
2.00  
1.80  
1.60  
1.40  
1.20  
1.00  
0.80  
0.60  
0.40  
0.20  
0

0 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 1.80 2.00 2.20 2.40 2.60

PHILIP MORRIS DATA (SEPTEMBER, 1975)

NICOTINE, MG/CIGT.

The 45° line represents zero difference  
in the nicotine between laboratories.

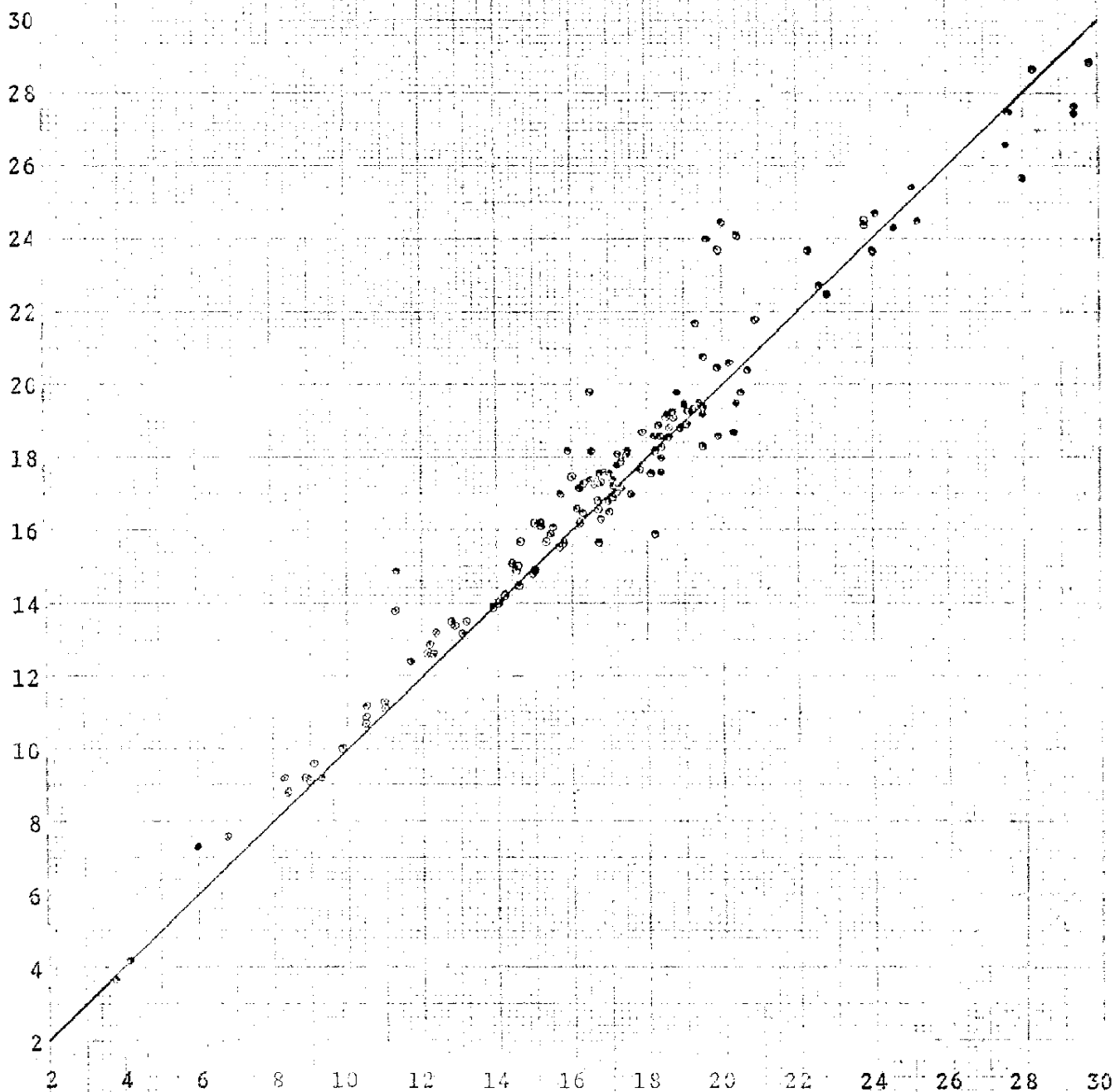
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GRAPH #3

FTC MARKET SAMPLE #18 VS. P. M. DATA (SEPTEMBER, 1975)

FTC TAR

FTC MARKET SAMPLE #18  
FTC TAR, NG/CIGT.



PHILIP MORRIS DATA (SEPTEMBER, 1975)

FTC TAR, MG/CIGT.

The 45° line represents zero difference  
in the FTC Tar between laboratories.

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GRAPH #4

FTC MARKET SAMPLE #18 VS. P. M. DATA (SEPTEMBER, 1975)

NICOTINE

FTC MARKET SAMPLE #18

NICOTINE, MG/CIGT.

2.60  
2.40  
2.20  
2.00  
1.80  
1.60  
1.40  
1.20  
1.00  
0.80  
0.60  
0.40  
0.20  
0

0 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 1.80 2.00 2.20 2.40 2.60

PHILIP MORRIS DATA (SEPTEMBER, 1975)

NICOTINE, MG/CIGT.

The 45° line represents zero difference  
in the nicotine between laboratories.

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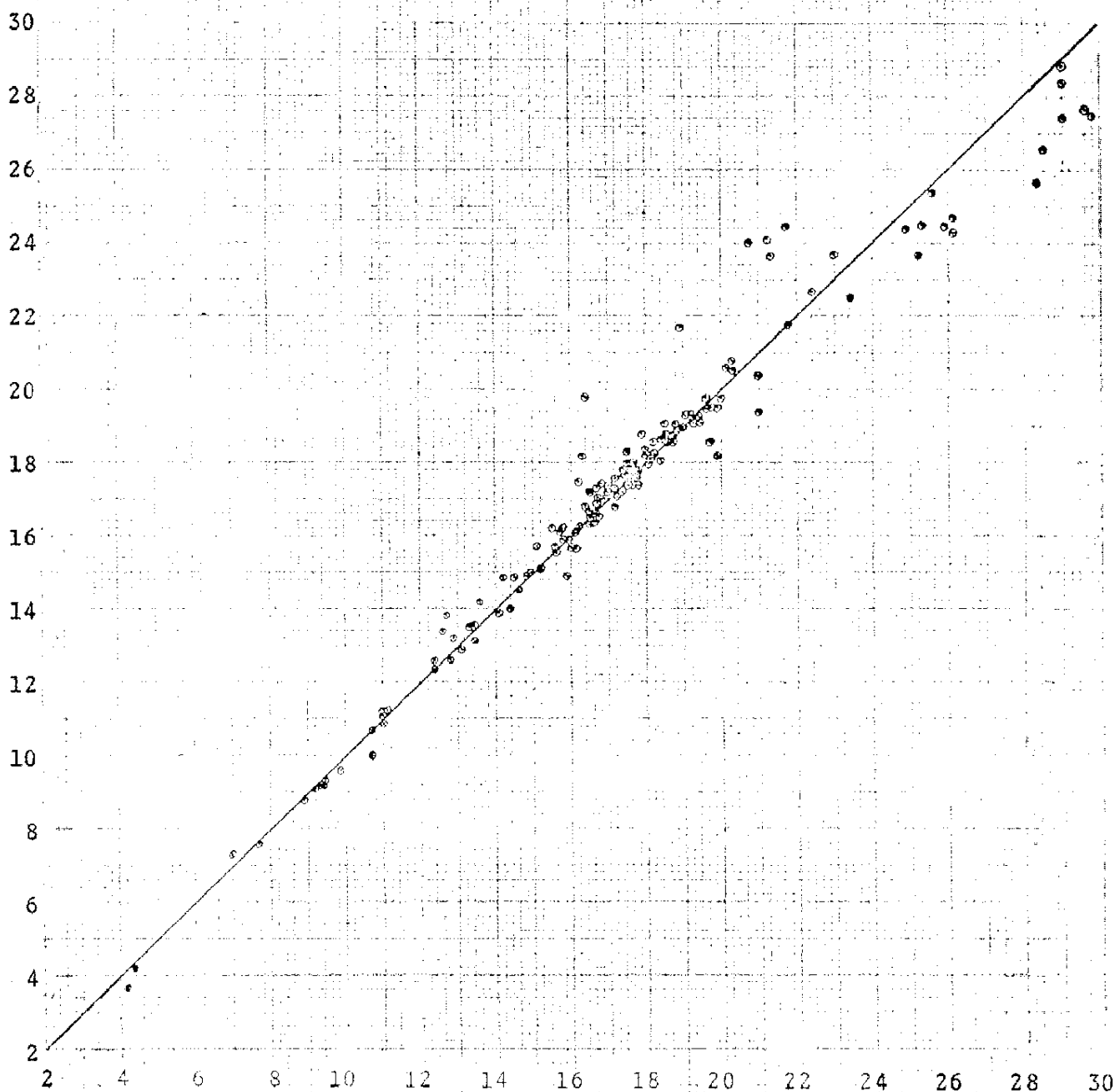
GRAPH #5

MARKET SAMPLE #18

TITL DATA VS. FTC DATA

FTC TAR

FTC MARKET SAMPLE #18  
FTC TAR, MG/CIGT.



TITL MARKET SAMPLE #18

FTC TAR, MG/CIGT.

The 45° line represents zero difference  
in the FTC Tar between laboratories.

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GRAPH #6

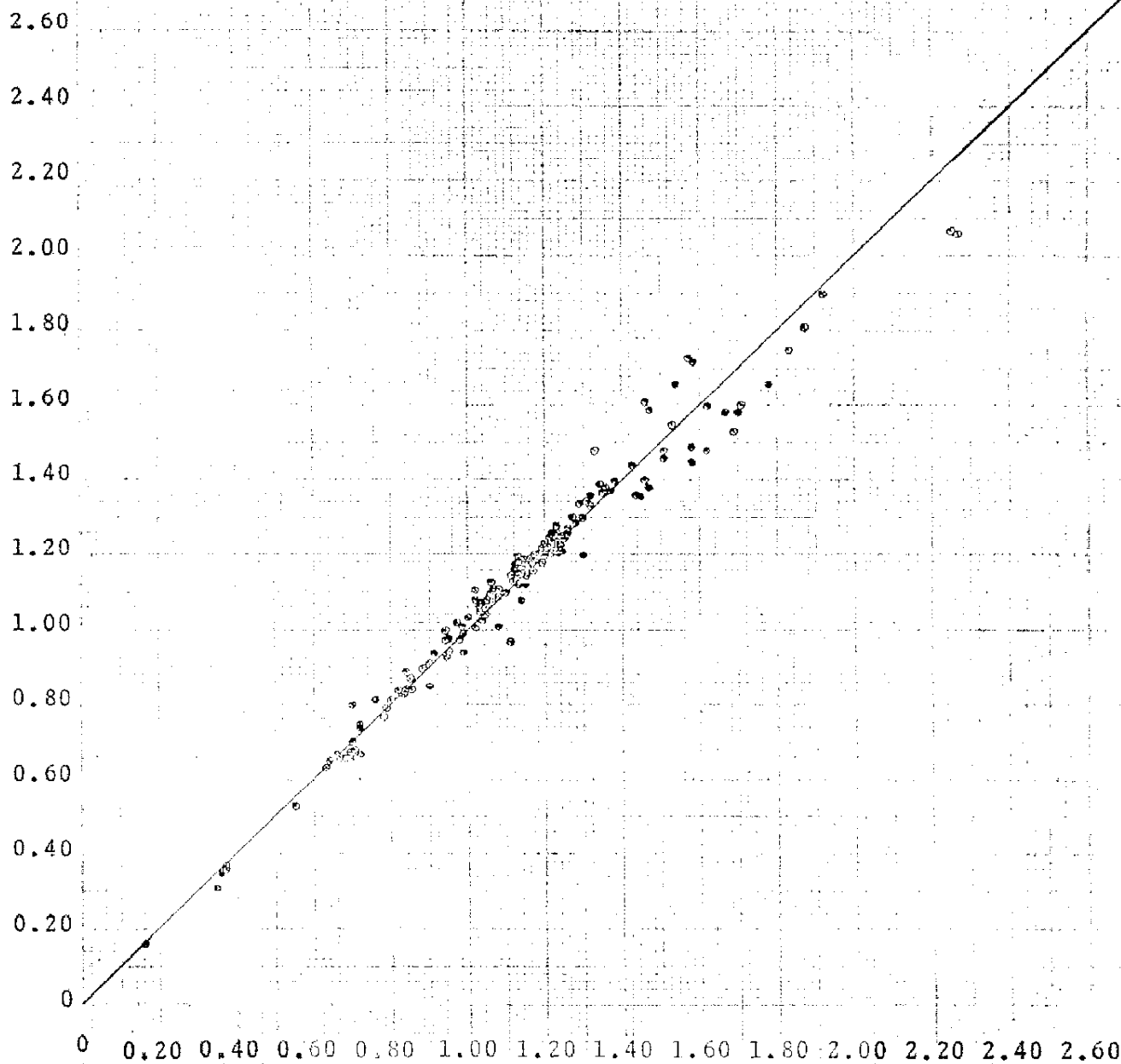
MARKET SAMPLE #18

TITL DATA VS. FTC DATA

NICOTINE

FTC MARKET SAMPLE #18

NICOTINE, MG/CIGT.



TITL MARKET SAMPLE #18

NICOTINE, MG/CIGT.

The 45° line represents zero difference  
in the nicotine between laboratories.

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